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TITLE:

APPARATUS AND METHOD FOR PRODUCING SINGLE CRYSTAL

ABSTRACT:

An apparatus having a crucible (1) for holding a raw material, a heating means (11) for heating the raw material in the crucible (1) and a crystal transporting means (17) for transporting a seed crystal (13) upwards from the inside of the crucible (1), which further comprises a heat conducting member (3) which extends upwards at least from the vicinity of the upper end of the crucible (1), surrounds a single crystal (15) formed, and is made of a material having heat conductivity, and an interface portion radiation heat blocking member (7) for blocking, at least during cooling after the formation of a single crystal, the radiation heat toward an upper portion above the interface between a taper portion (15a) of the formed single crystal (15) connecting with the seed crystal (13) and a straight bulge portion (15b) having a cylindrical shape connecting with the taper portion (15a) of the formed single crystal (15). The use of the apparatus reduces the temperature difference in the radius direction of the single crystal (15), resulting in the reduction of the occurrence of defects or cracks, which leads to the reduction of the fraction defective in production of single crystals.